Amendments to the Claims:

This listing will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Canceled):

Claim 2 (Currently amended): A method of making a silicon steel, said method comprising adding about 0.01 to about 1.0 wt.% carbon to a steel containing from about 5 to 10 wt.% Si and subsequently homogenizing said steel at a temperature from about 1200°C to up to less than the melting point of said steel for a time sufficient to substantially remove most of the secondary phases from said steel, said homogenization process ~~is~~ being carried out in a protective environment.

Claim 3 (Currently amended): A method according to claim 2, wherein said ~~homogenizing process is carried out in a~~ protective ~~environment, defined as~~ environment comprises at least one of a non-oxidizing environment, a de-carburizing environment ~~or~~ and a vacuum.

Claim 4 (Currently amended): A method according to claim 2, further comprising ~~wherein said method~~ using a thermo-mechanical ~~control~~ process to adjust ~~tailor~~ the carbon content of the high silicon steel.

Claim 5 (Currently amended): A method according to claim 2, further comprising ~~wherein conventional metal working methods can be used to produce~~ producing carbon-containing high-silicon steel sheets from the high silicon steel. ~~of various thickness, the thickness of the sheet is of 0.5mm, 0.35mm and 0.1mm respectively, a controlled microstructures for such sheets would have substantially uniform grains approximating to the thickness of the sheet, e.g., on the order of 0.5mm, 0.35mm and 0.1mm, respectively.~~

Claim 6 (Currently amended): A method according to claim 5, wherein said carbon-containing high-silicon steel sheets are produced by ~~conventional metal working methods comprise~~ at least one of: ~~the following steps:~~ (1) continuous casting and continuous hot rolling with a rolling temperature between ~~600°C and 1000°C, ingot casting is continuously hot rolled at temperature between~~ 600°C and 1000°C; (2) combinations ~~combination~~ of hot-rolling and cold-rolling with ~~temperature~~ temperatures between room temperature and up to 500°C to produce thin sheets; and (3) combinations ~~combination~~ of hot-rolling of a single sheet and hot-rolling of double or multiple sheets to produce thin sheets.

Claim 7 (Currently amended): A method according to claim 2, wherein the high silicon steel ~~produced by the method having~~ has a room temperature ductility of at least 10%; an elongation of greater than 20% from 200°C to 800°C, and greater than 100% at or above 800°C; a strength of about 600MPa from room temperature to about 500°C; an oxidation rate of 0.01g/m^2 at 500°C after 50 hours of air exposure; and ~~exhibiting~~ exhibits the following soft magnetic properties: maximum permeability of 46,000μm, a core loss at different frequency ranges, of

$W_{10/50}$=0.49w/kg, $W_{10/400}$=10.56w/kg, $W_{5/1K}$=11w/kg, $W_{1/5K}$=8.71w/kg, $W_{0.5/10}$=6.5w/kg.

Claim 8 (New): A method according to claim 5, wherein the carbon-containing high-silicon steel sheets are produced with thickness of 0.5 mm or less.

Claim 9 (New): A method according to claim 8, wherein the carbon-containing high-silicon steel sheets are produced with of from about 0.1mm to about 0.5 mm.

Claim 10 (New): A method according to claim 5 wherein the carbon-containing high-silicon steel sheets are produced with microstructures that have substantially uniform grains that approximate the thickness of the sheets.

Claim 11 (New): A method according to claim 8 wherein the carbon-containing high-silicon steel sheets are produced with microstructures that have substantially uniform grains that approximate the thickness of the sheets.

Claim 12 (New): A method according to claim 9 wherein the carbon-containing high-silicon steel sheets are produced with microstructures that have substantially uniform grains that approximate the thickness of the sheets.